

I. AMENMENTS TO THE CLAIMS:

Kindly amend claims 12 and 29 as follows.

The following listing of claims will replace all prior versions of claims in the above-captioned application.

LISTING OF CLAIMS:

Claims 1-11 have been cancelled.

12. (Currently Amended) A laser machining device for drilling holes in fluid injection device components, particularly for injecting fuel into a combustion engine, said machining device comprising:

(a) a laser resonator formed of a first solid state active medium and first optical pumping means, wherein said first optical pumping means is formed by laser diodes and said resonator generates, without a Q switch, primary pulses having a length within or greater than the microsecond range; and

(b) modulation means arranged between said resonator and a machining head, wherein said modulation means receives primary pulses from said resonator and operates to output a train of secondary pulses for each primary pulse entering therein from said resonator, and each secondary pulse has a shorter length than the corresponding primary pulse.

13. (Previously Presented) The laser machining device according to claim 12, further comprising an optical diode arranged downstream of said resonator.

14. (Previously Presented) The laser machining device according to claim 12, further comprising means for amplifying the pulses supplied by said resonator.

15. (Previously Presented) The laser machining device according to claim 13, further comprising means for amplifying the laser pulses supplied by said resonator, said amplification means being arranged downstream of said optical diode.

16. (Previously Presented) The laser machining device according to claim 13, wherein said optical diode is formed by a linear polarizer and by a quarter-wave plate arranged following said polarizer.

17. (Previously Presented) The laser machining device according to claim 15, wherein said optical diode is formed by a linear polarizer and by a quarter-wave plate arranged following said polarizer.

18. (Previously Presented) The laser machining device according to claim 14, wherein said amplification means are controlled so that amplification pulses are provided with a time lag relative to the primary pulses so that the amplitude of said secondary pulses is modulated.

19. (Previously Presented) The laser machining device according to claim 15, wherein said amplification means are controlled so that amplification pulses are provided with a time lag relative to the primary pulses so that the amplitude of said secondary pulses is modulated.

20. (Previously Presented) The laser machining device according to claim 14, wherein said amplification means include a cavity formed by a second solid state active medium and by second optical pumping means formed by a flash lamp.

21. (Previously Presented) The laser machining device according to claim 18, wherein said amplification means include several active mediums defining several amplification levels, each of said active mediums being pumped by a flash lamp.

22. (Previously Presented) The laser machining device according to claim 12, wherein said resonator is arranged for supplying at the outlet thereof a linearly polarized laser beam.

23. (Previously Presented) The laser machining device according to claim 21, wherein said first active medium is formed by a crystal selected from among crystals that directly generate a linearly polarized light.

24. (Previously Presented) The laser machining device according to claim 12, wherein said resonator supplies primary pulses in the microsecond range having an energy such that a hole is drilled in a given component by a single primary pulse generated by said resonator.

25. (Previously Presented) The laser machining device according to claim 12, wherein each of the primary pulses has a length between fifty microseconds (50 μ s) and one millisecond (1 ms).

26. (Previously Presented) The laser machining device according to claim 12, wherein each of the secondary pulses has a length between one microsecond (1 μ s) and twenty microseconds (20 μ s).

27. (Previously Presented) The laser machining device according to claim 25, wherein each of the secondary pulses has a length between one microsecond (1 μ s) and twenty microseconds (20 μ s).

28. (Previously Presented) The laser machining device according to claim 12, wherein said modulation means comprises a Pockels cell.

29. (Currently Amended) A laser machining device for drilling holes in fluid injection device components, particularly for injecting fuel into a combustion engine, said machining device comprising:

(a) a laser resonator formed of a first solid state active medium and first optical pumping means, wherein said first optical pumping means is formed by laser diodes and said resonator generates, without a Q switch, primary pulses having a length within or greater than the microsecond range;

(b) modulation means arranged between said resonator and a machining head, wherein said modulation means receives primary pulses from said resonator and operates to output a train of secondary pulses for each primary pulse entering therein from said resonator, and each secondary pulse has a shorter length than the corresponding primary pulse; and

(c) means for amplifying the pulses supplied by said resonator, wherein said amplification means are controlled so that amplification pulses are provided with a time lag relative to the primary pulses so that the amplitude of said secondary pulses is modulated, and wherein said amplification means include several active mediums defining several amplification levels, wherein each of said active mediums is pumped by a flash lamp,

wherein said first active medium is formed by a Nd:YVO₄ crystal that directly generates a linearly polarized light.